

Invention Title: Multi-Axes Tool Compensation -- 3D and 5-axis real-time interactive tool compensation inside the CNC machine tool controller.

Inventor: Gary John Corey

Application No. 10/079,309

Inventor's Phone No.: (909) 674-8100

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CNC Machine Tool Parameters Ver 1.2

Tool Parameters								Tool Definitions (Solid Mode Only)				
Size	Horiz	Vert	Height	Wear	Custom1	Custom2		Corner Radius	Bottom angle	Side angle	Length	Type
1	0.25	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	3.0	0
2	0.0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	0
3	0.0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	0
4	0.0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	0
5	0.0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	0
6	0.0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	0
7	0.0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	0
8	0.0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	0
9	0.0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	0
10	0.0	0.0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	0.0	0

Machine Offsets							
X	Y	Z	4	5	6	7	8
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Feature Offsets							
G54	G55	G56	G57	G58	G59		
0.0	0.0	0.0	0.0	0.0	0.0		
0.0	0.0	0.0	0.0	0.0	0.0		
0.0	0.0	0.0	0.0	0.0	0.0		
0.0	0.0	0.0	0.0	0.0	0.0		
0.0	0.0	0.0	0.0	0.0	0.0		
0.0	0.0	0.0	0.0	0.0	0.0		
0.0	0.0	0.0	0.0	0.0	0.0		
0.0	0.0	0.0	0.0	0.0	0.0		

Optional Settings

☐ Dry Run (Disable Z Spindle Feed Mode)

☐ Bitmap G-Code Display (Speed Penetration)

☒ Graphics: Solids w/ Wire Frame

☐ Tolerance (inch and inch/mm)

☐ Block Skip Character

Teach X Teach Y Name (No Path)

Verify Auto Cancel

☒ Absolute (0)

☐ Incremental (1)

☐ Bit Radius (2)

Solid Stock

Begin Z @ 0.0

Extra Stock 1.0

F4 Key F5 Key F6 Key F7 Key F8 Key F9 Key

F5 Tool Offsets F6 Tool Line F7 Tool Photos F8 Convert to Metric F9 Convert to Inch

FIG 1.

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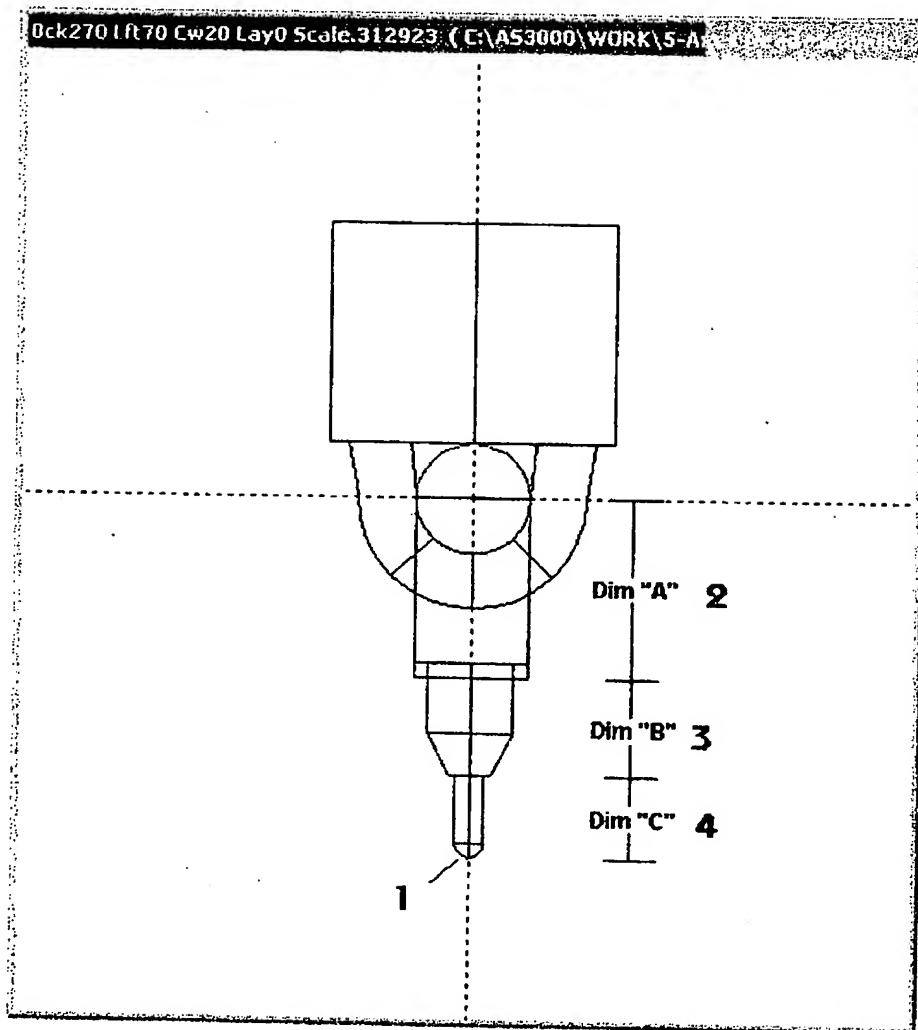


FIG 2.

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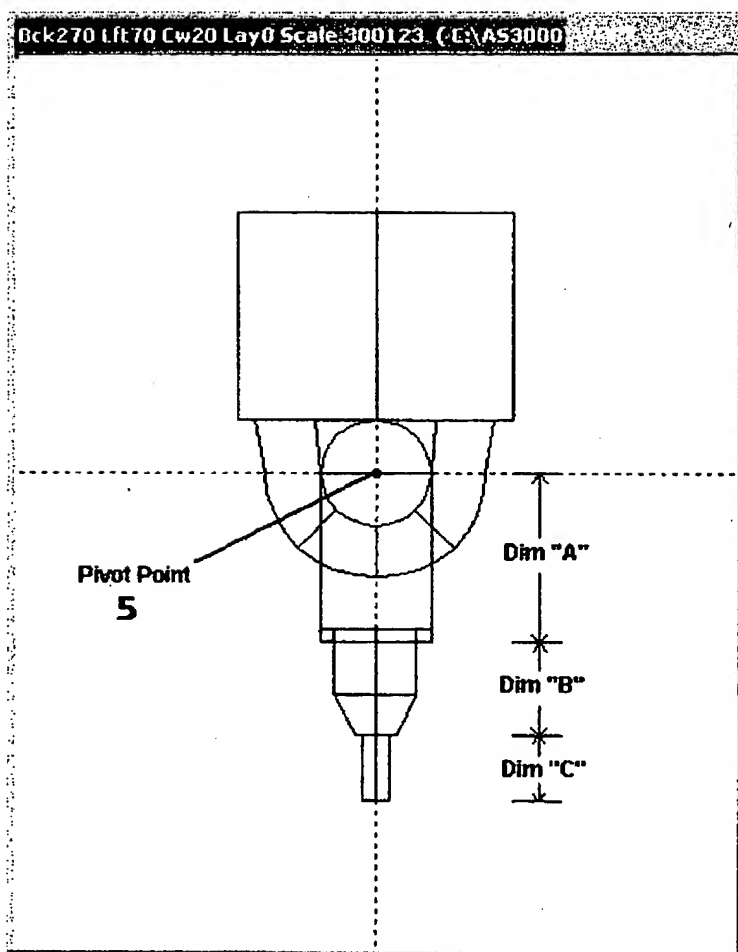


FIG 3.

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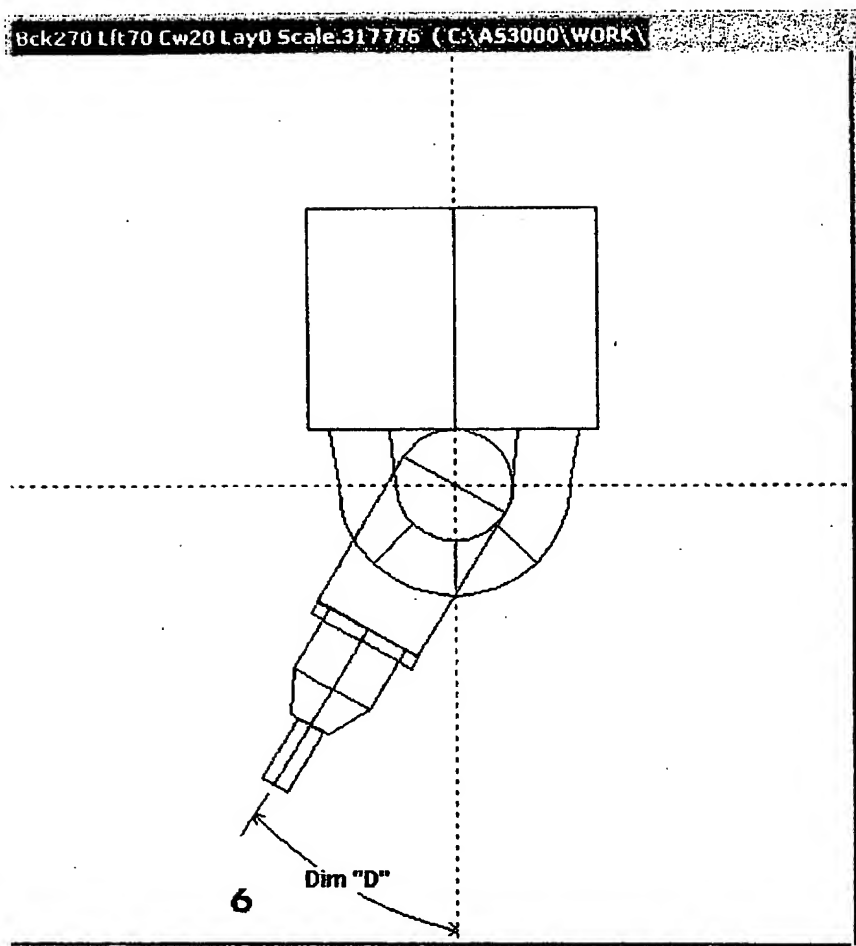


FIG 4.

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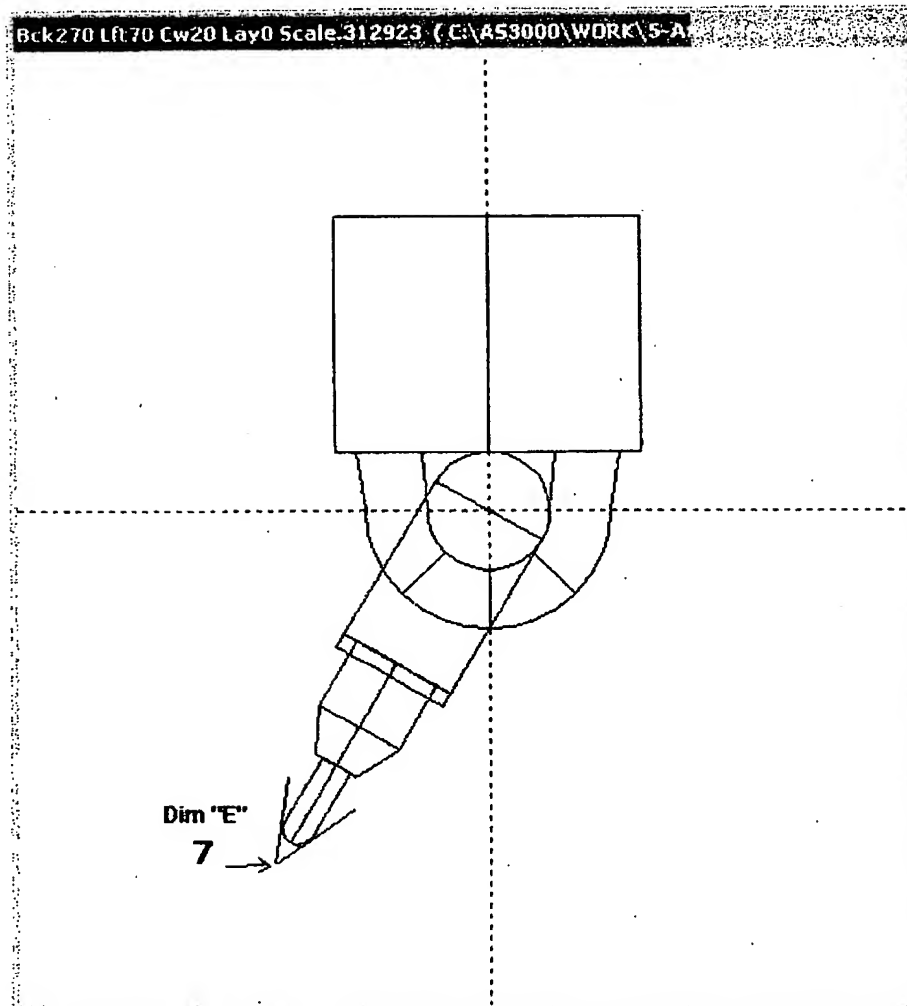


FIG 5.

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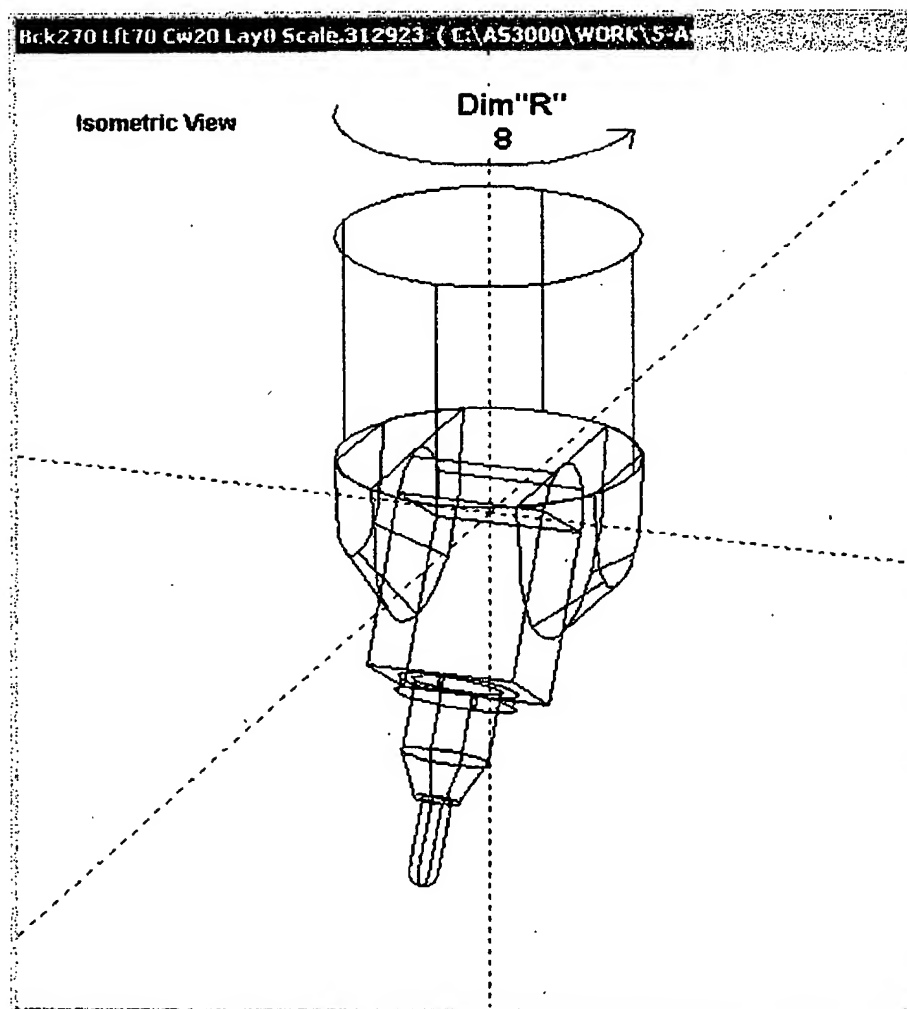


FIG 6.

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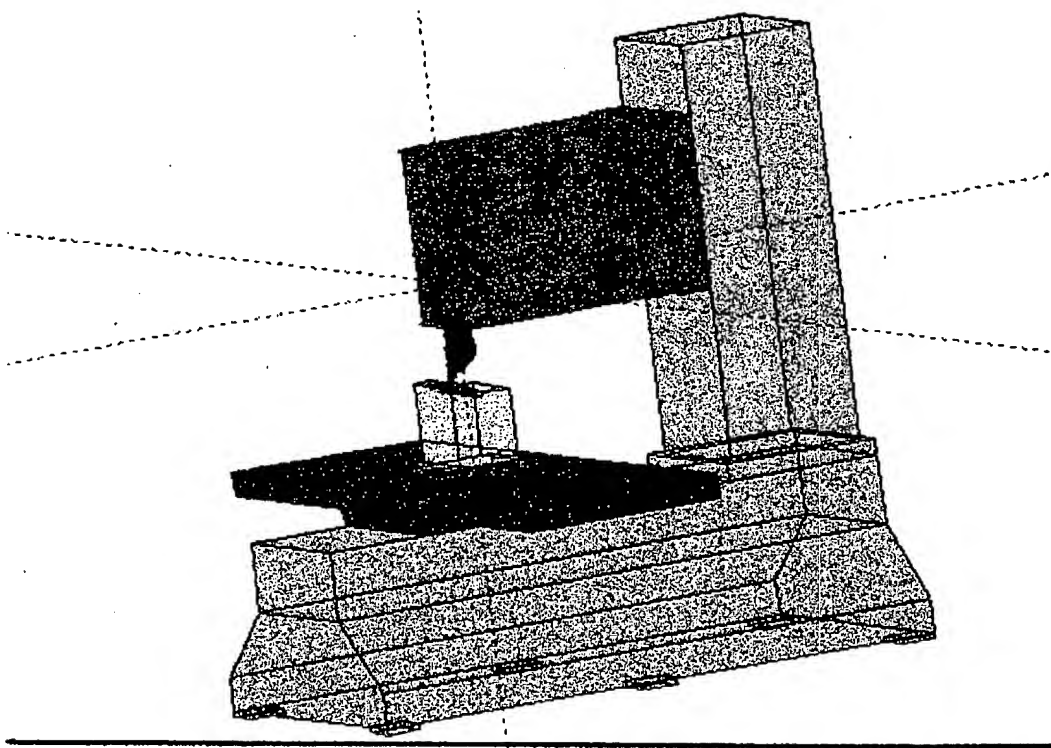


FIG 7.

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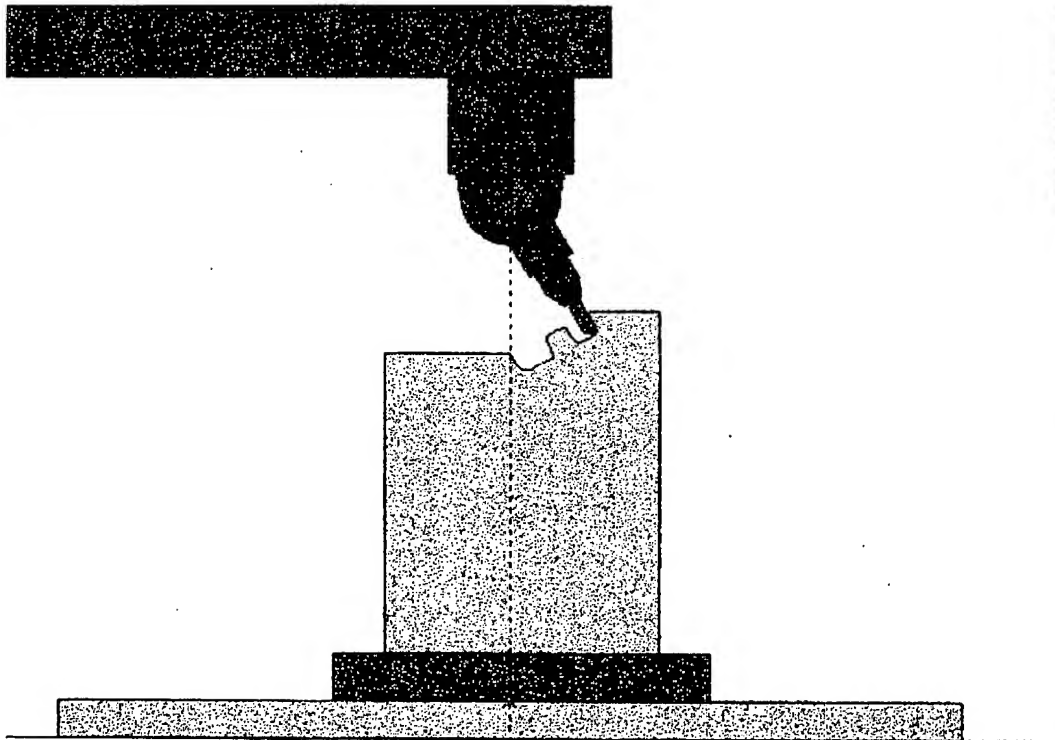


FIG 8.

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N10 T01 M6
N20 G90 S200 M3
N30 G0 A270. B0
N40 X0 Y-21. Z0 M8
N50 Z20.5
N60 G1 Y-10.933 Z17.9365 A270. B-30. F10.
N70 Y-3.2465 Z10.75 A270. B-60.
N80 Y0 Z.5 A270. B-90.
N90 Y-3.2465 Z10.75 A90. B-60.
N100 Y-10.933 Z17.9365 A90. B-30.
N110 Y-21. Z20.5 A90. B0
N120 G1 Z0
N130 G0 A0 B0
N140 X0 Y-21. Z0 S200 F10.
N150 G1 Z20.5
N160 G1 Y-10.9332 Z17.9367 A0 B-29.9993 F10.
N170 Y-3.2463 Z10.7498 A0 B-60.0007
N180 Y0 Z.5 A0 B-90.
N190 Y-3.2465 Z10.75 A180. B-60.
N200 Y-10.933 Z17.9365 A180. B-30.
N210 Y-21. Z20.5 A180. B0
N220 Z0
N230 G0 A0 B0
N240 M30
%

FIG 9.